

CHAPTER V

Indian Oil Corporation Limited

LPG operations

Highlights

The Company mixed butane and propane to form Liquefied Petroleum Gas (LPG) in different proportions other than the one considered for subsidy claims resulting in loss of Rs.40.97 crore during five years ended March 2008.

(Para 5.8.1.1)

The Company claimed Rs.51.22 crore as subsidy for stock loss without actually incurring it.

(Para 5.8.2.2)

The Company incurred higher bottling cost of Rs.716.06 crore as compared to benchmark operating cost during the period 2004-05 to 2007-08. Due to this the Company could not claim subsidy to the extent of Rs.90.92 crore.

(Para 5.8.2.2)

Surplus manpower over the benchmark fixed for the bottling plants resulted in higher operating cost to the extent of Rs.51.93 crore. Apart from having surplus manpower, the Company made overtime payment at plants.

(Paras 5.8.3.1 and 5.8.3.2)

Despite adoption of Industry Logistic Plan system for distribution of bulk/packed LPG to meet the market demand, it failed to establish the economical linkages, leading to manual intervention/regular deviation.

(Para 5.8.4.1)

The Company suffered a loss of Rs.15.29 crore due to short receipt of bulk LPG through Railways due to inadequate infrastructure and non-appointment of surveyor at Reliance Industries Limited, Jamnagar to witness the loading operations.

(Para 5.8.4.3)

Absence of effective system for exchange and reconciliation of cylinders amongst Oil Marketing Companies (OMCs) resulted in blocking of working capital of OMCs to the extent of Rs.5.44 crore.

(Para 5.8.5.3)

Summary of recommendations

- 1. The Company should evolve an effective system to conform to the Subsidy Scheme 2002 for mixing propane and butane to avoid loss and to ensure quality supply to the customers at optimum cost.*

2. *The Company needs to regularly review and redefine the actual installed capacities of the bottling plants in order to make correct assessment of their performance and operating efficiencies.*
3. *Existing cost monitoring and control systems should be streamlined and made more stringent so that the operating cost is restricted to the benchmark.*
4. *The Company should ensure deployment of manpower within benchmarks to control the operating cost.*
5. *Efforts need to be made to rationalise overtime payment through deployment of manpower within benchmark. Overtime should be paid in line with the statutory provisions.*
6. *The Company needs to identify the reasons for abnormal increase in consumption of valves and take remedial measures for non-achievement of the prescribed limit.*
7. *The Company should ensure minimum transportation charges by reviewing the slabs system in other State Offices in line with Bihar State Office.*
8. *Adequate weighment infrastructure should be installed at the source and destination to avoid losses and pilferages.*
9. *The Company should revisit the existing transportation agreement provisions relating to weight loss norms and should rationalise the same with available standards.*
10. *Bulk and packed LPG stock levels should be maintained within the permissible limits prescribed by the Chief Controller of Explosives to ensure safety of the plant, staff and surrounding property/population.*
11. *The Company should evolve an effective system for timely disposal of scrap/idle inventory, to avoid blockade of funds.*
12. *The Company may evolve an effective control system of exchange and reconciliation of cylinders with other OMCs at regular intervals.*
13. *The Company should evolve comprehensive customer master data and take necessary steps to identify and capture details of LPG consumers like size of the family and consumption pattern necessary for prevention of unauthorised use of domestic LPG. The Company should also share customer database with other OMCs to avoid release of multiple connection.*
14. *LPG order 2000 needs to be revised and effective system may be put in place to take back LPG connections from Piped Natural Gas (PNG) consumers to ensure that a customer is allowed to hold only one connection either PNG or LPG at a point of time.*
15. *The Company should review the system of fixing Supply Plan for Distributors to rationalise it in line with actual consumption pattern based on family size. The Company should also maintain cylinders masters with distinctive numbers allocated to each cylinder to control diversion of domestic LPG for commercial use.*

16. *The Company should revisit its existing Marketing discipline guidelines and make penal provisions more stringent.*
17. *The Company needs to strictly deal with tampering of cylinder weight to discourage such malpractices so as to ensure supply of proper weight of LPG to the customers*
18. *The Marketing discipline guidelines should be strictly followed in letter and spirit for an effective control and monitoring system of the distributors.*
19. *The Company should amend existing provisions of security deposit in the contracts so as to secure comprehensive coverage of LPG consignments.*

5.1 Introduction

Indian Oil Corporation Limited (Company) was incorporated in 1964 and is presently a dominant player and India's largest public sector oil marketing company (OMC). It had a market share of 49 per cent of the Liquefied Petroleum Gas (LPG) market during 2007-08. The balance was shared by other OMCs viz., Bharat Petroleum Corporation Limited (BPCL) and Hindustan Petroleum Corporation Limited (HPCL) as 26 per cent and 25 per cent respectively. The Company has 89 LPG bottling plants with bottling capacity of 4,165 TMT¹.

The OMCs procure LPG from refineries, fractionators (ONGC and GAIL), private parties (M/s. Reliance and M/s. Essar) and import. LPG is bottled in the bottling plants and supplied to the customers in the packed form.

The Company is marketing packed LPG under its brand name "Indane" to domestic customers (in cylinders of 5 kilogram (kg) and 14.2 kg) and to commercial customers (in cylinders of 19 kg, 35 kg and 47.5 kg) through 4996 distributors attached with its bottling plants as on March 2008 to cater to the demand of 5.04 crore consumers.

5.2 Organisational set-up

The LPG operation is controlled by the Marketing Division of the Company located at Mumbai and headed by Executive Director (LPG Marketing). The network consists of Regional Offices located at Mumbai, Delhi, Kolkata and Chennai, 16 State Offices and 39 Area Offices. The Executive Director (LPG) reports to Director (Marketing).

5.3 Scope of Audit

The performance audit covered the activities relating to sourcing and planning, maintenance, transportation and selling and distribution of LPG through 30 bottling plants of the Company in four regions during the last five years ended March 2008 to assess the efficiency, economy and effectiveness of these activities. Wherever records/information for five years was not available, the scope of audit was restricted to the period for which information was provided by the Company.

5.4 Audit objectives

Performance audit was carried out to

- evaluate sourcing and logistics arrangements of LPG planned to encourage economies and promote efficiencies;

¹ Thousand Metric tonnes

- examine the performance of LPG bottling plants to evaluate the degree of economy, effectiveness and efficiency in operation;
- review cost control mechanism aimed to confine cost within the defined cost ceilings;
- analyse the system of subsidy claims and to verify whether the subsidy was claimed in the letter and spirit of the subsidy scheme to quantify irregular subsidy claims;
- study whether distribution channel for supply of LPG was economical, efficient and effective; and
- scrutinise existing monitoring system necessary to curb diversion of subsidised supply for unauthorised uses.

5.5 Audit criteria

The following criteria were used in the performance audit:

- Policies and guidelines of the Government of India, the Company and minutes of Board of Directors/Committees;
- Operational and financial performance indicating the benchmark/budgeted/targetted cost and issue price/cost price considered in the subsidy scheme of the Government of India;
- Provisions of rules and regulations and national/international standards;
- Guidelines and manuals relating to sourcing, logistics, plant operation and supply and distribution;
- Terms and conditions of contracts with vendors, distributors and customers for procurement, logistics, maintenance and services, supply and distribution;
- Monitoring mechanism envisaged in the guidelines to check the diversion, multiple connection and unauthorised usages.

5.6 Audit methodology and sample size

The audit methodology involved examination of Management Information System reports generated through SAP/ERP documents, analysis of statistical information and discussion with the Management to evaluate the operating activities of bottling plants, sourcing and logistics planning of bulk LPG, sales and distribution and subsidy.

30 out of 89 bottling plants were selected on the basis of operating cost per MT by using Stratified Random Sampling Method through IDEA² package by categorising bottling plants in three capacity utilisation strata *i.e.* less than 100 *per cent*, between 100 *per cent* to 150 *per cent* and more than 150 *per cent* in the ratio of 2:1:2 respectively.

5.7 Acknowledgement

Audit acknowledges the cooperation of the Company in providing necessary records and information. An Entry conference was held on 8 July 2008 with the Management to discuss the audit objectives, audit criteria and audit methodology. The draft performance audit report was issued to the Management on 19 September 2008. An Exit conference

² *Interactive Data Extraction and Analysis*

was held on 14 November 2008 with the Management to discuss the results of this report. The views expressed by them have been suitably incorporated in this report.

5.8 Audit findings

As per the Domestic LPG Subsidy Scheme, 2002, OMCs get subsidy from the Government of India (GOI) as difference between cost (defined under subsidy scheme) and retail selling price (issue price) of bottled LPG fixed by the GOI.

Major components of cost as per the subsidy scheme were landed cost, bottling charges, transportation cost and stock loss. Audit observations in each of these components have been discussed below:

5.8.1 Sourcing and logistics

LPG is procured from indigenous sources and the deficit is met through imports. Procurement of LPG by the Company during the last five years was as under.

Table 5.1

(figures in TMT)

Year	2003-04		2004-05		2005-06		2006-07		2007-08	
	TMT	%	TMT	%	TMT	%	TMT	%	TMT	%
(a) Indigenous										
Refineries of OMCs	1505	33.79	1580	32.67	1868	37.64	1876	37.54	1970	35.92
Fractionators	826	18.55	814	16.83	784	15.80	745	14.91	759	13.84
Private parties	1236	27.75	1340	27.71	1055	21.26	1375	27.51	1480	26.99
(b) Import	887	19.91	1102	22.79	1256	25.31	1002	20.05	1275	23.25
Total (a+b)	4454	100.00	4836	100.00	4963	100.00	4998	100.00	5484	100.00

5.8.1.1 Losses in LPG import

Under the Domestic LPG Subsidy Scheme, 2002 the cost price of the domestic LPG is worked out on the basis of a mixture of butane and propane in the ratio of 60 *per cent* butane and 40 *per cent* propane.

Audit analysis revealed that the Company imported 4,956 TMT butane which was 90 *per cent* of total 5,522 TMT butane and propane imported and supplied as LPG during the last five years ended March 2008. Thus, on an average the Company supplied LPG as a mixture containing more than 60 *per cent* butane which was not in accordance with the LPG Subsidy Scheme. As the Company raised its subsidy claims on the basis of LPG in the ratio of 60:40 for butane and propane, higher import of costlier butane and its supply

in LPG resulted in loss of Rs.40.97 crore to the Company during the last five years owing to rising cost of butane since 2003-04.

It was also observed from the test reports of LPG supplied by the fractionators to the Company that butane content therein was less than 60 *per cent* though they were being paid by the Company for LPG containing 60 *per cent* butane. Receipt of lesser butane in the LPG from fractionators resulted in loss to the Company due to price difference of propane and butane. The amount of loss sustained by the Company on this account could not be ascertained in the absence of proper system in place in the Company to maintain break-up of the quantities of propane and butane received from the LPG producing sources. The test reports of LPG supplied by OMCs and private parties were not made available to Audit for analysis and comment thereon.

Further, the vapour pressure of butane is around one-third that of propane. Higher butane content in LPG supplied by the Company meant lesser vaporisation especially in winter season resulting in non-receipt of full value of money by the customers due to residual gas left in the cylinders.

The Management stated (November 2008) that the difference in the price between propane and butane had reversed gradually from 2003-04 onwards and attempts were also made to upgrade the infrastructure at Vizag and Mangalore and import propane and butane in the ratio of 25:75 during 2009 as against the earlier average of 9:91. LPG supplies to customers were meeting BIS specifications.

Recommendation No. 5.1

The Company should evolve an effective system to conform to the Subsidy Scheme 2002 for mixing propane and butane to avoid loss and to ensure quality supply to the customers at optimum cost.

5.8.2 Capacity utilisation and operating efficiency

5.8.2.1 Installed capacity

The rated capacities of the bottling plants were assessed by the Company as per the benchmarks defined during the APM³ period on industry basis. The Company had not revised the installed capacities of the bottling plants considering the automation and upgradation of carousels at the bottling plants. It was observed that based on the parameters defined by the Committee (July 2001), the actual available rated capacity of 72 bottling plants in 2002-03 was 5,583 TMTA⁴ as against 3,100 TMTA assessed by the Management. During 2002-03 the Company could utilise the capacity of 3,725 TMTA leaving an idle capacity of 1,858 TMTA. Despite idle capacity the Company commissioned/upgraded the bottling plants with an additional capacity of 1,436 TMTA during 2002-03 to 2007-08. Actual utilisation of the bottling plants during 2007-08 was only 4,950 TMTA which was even less than the available rated capacity in 2002-03. Thus, considering the available idle capacity in 2002-03, creation of additional capacity of 1,436 TMTA was not required. On account of low assessed capacity the Company was also showing higher capacity utilisation of the bottling plants.

³ *Administered Price Mechanism*

⁴ *Thousand metric tones per annum*

The Management accepted (December 2008) that rated capacities of the bottling plants were recognised as per the benchmarks defined during the APM period on Industry basis and were to be re-benchmarked on the industry basis.

Thus, non-revision of the rated capacity indicated an incorrect depiction of total capacity and utilisation of the bottling plants.

Recommendation No. 5.2

The Company needs to regularly review and redefine the actual installed capacities of the bottling plants in order to make correct assessment of their performance and operating efficiencies.

5.8.2.2 Operating cost of bottling plants

With a view to control operating cost of bottling plants, the Company had fixed (September 2003) benchmarks based on their installed capacities. Weighted average operating cost of bottling plants during last four years *vis-à-vis* benchmarks was as under:-

Table 5.2

(Figures in Rs. per MT)

2004-05		2005-06		2006-07		2007-08	
Weighted average operating cost as per benchmarks	Actual operating cost	Weighted average operating cost as per benchmarks	Actual operating cost	Weighted average operating cost as per benchmarks	Actual operating cost	Weighted average operating cost as per benchmarks	Actual operating cost
589.96	682.12	593.04	658.61	582.68	842.82	583.92	849.59

It was noticed in audit that:

- An analysis of the bottling cost of individual plants indicated that 46 out of 78 bottling plants in 2004-05 that increased to 72 out of 80 bottling plants during 2007-08 were unable to achieve operating cost benchmark. The Company incurred higher bottling cost of Rs.716.06 crore as compared to benchmark operating cost during the period 2004-05 to 2007-08.
- Out of the above bottling plants the operating cost was even more than the cost ceiling prescribed under the subsidy scheme⁵ in 32 bottling plants during 2004-05 that increased to 39 plants during 2007-08 as a result of which the Company could not claim subsidy to the extent of Rs.90.92 crore (Rs.45.46 crore from the GOI and Rs.45.46 crore from fractionators).

⁵ Rs.780.77 per MT for 2004-05 and Rs.908 per MT for 2005-06 onwards.

- As the actual operating cost in more than 50 *per cent* bottling plants was less than the cost ceiling fixed in the subsidy scheme, there was a need to revise the cost ceiling based on the standard and normative conditions.
- The subsidy scheme provides for operational stock loss at the rate of 0.25 *per cent*. However, the Company has fixed zero *per cent* norm for operational losses and was able to achieve it in 80 out of 89 bottling plants. Despite achieving zero *per cent* stock loss, the Company claimed subsidy of Rs.51.22 crore (Rs.25.61 crore from the GOI and Rs.25.61 crore from fractionators) against the notional stock loss not actually incurred during last five years ended March 2008.

The Management stated (November 2008) that during 2003 the Company had taken an initiative to have common understanding at all levels about the cost targets and to take effective steps in achieving the same. However, bigger impacts could not be achieved within a short period as these mainly involved manpower related issues. Further with regard to subsidy, the Management added that the operating cost element in the 'Subsidy Scheme' had been adopted on industry basis and not on the basis of any particular bottling plant with resultant plus/minus variations.

The reply was not convincing as the Company could not achieve the benchmarks even after more than four years.

Recommendation No. 5.3

Existing cost monitoring and control systems should be streamlined and made more stringent so that the operating cost is restricted to the benchmark.

5.8.3 Manpower deployment

5.8.3.1 Excess manpower

Manpower cost is a major component of the operating cost. The Company deployed White Collar Workmen (WCW)⁶, Blue Collar Workmen (BCW)⁷ and contracted labour on the basis of carousels and shift operation. However, it was noticed that the Company had actually deployed BCWs in excess of the benchmarks fixed (September 2005) by them as below:

Table 5.3

Year→	2005-06				2006-07				2007-08			
Region	No. of plants	Bench mark	Actual	Surplus	No. of plants	Bench mark	Actual	Surplus	No. of plants	Bench mark	Actual	Surplus
Northern	22	667	1059	392	19	633	979	346	21	665	951	286
Eastern	5	140	275	135	8	176	315	139	6	135	260	125
Western	8	166	248	82	7	144	215	71	6	127	180	53

⁶ Deployed for office work viz., finance and accounts, store and other clerical work

⁷ Deployed for LPG operation and production activities

Southern	10	239	283	44	7	182	212	30	5	114	142	28
Total	45	1212	1865	653	31	1135	1721	586	38	1041	1533	492

Deployment of BCWs in excess of the benchmark fixed for the bottling plants resulted in extra expenditure of Rs.51.93 crore on account of staff cost during the last three years ended March 2008 resulting in higher operating cost.

The Management (November 2008) while agreeing with Audit stated that as part of regular efforts to reduce cost and increase efficiencies; the Company had devised 'benchmarking' of manpower for its LPG plants, based on capacities, number of shifts operated, type of equipment available, etc.

The reply of the Management was not tenable because the benchmarks were fixed on the assessment of plant capacity, operation, work load, etc. and as such, actual deployment of manpower should be within the prescribed benchmark. Excess deployment of manpower beyond the benchmarks resulted in higher operating cost.

Recommendation No. 5.4

The Company should ensure deployment of manpower within benchmarks to control the operating cost.

5.8.3.2 Overtime

Audit analysis revealed that in addition to the deployment of manpower in excess of benchmarks as pointed out in the preceding para, there was overtime payment indicating non-identification of extra manpower and ineffective deployment of surplus manpower.

Moreover, as per Factories Act 1948, payment of overtime should not exceed 12 hours in a week. However, a test check revealed substantial payments of overtime in excess of the statutory ceilings during 2007-08 as detailed below:

Table 5.4

Bottling plant	Manpower in excess of benchmark	Number of cases of payment of overtime	Number of cases in which overtime more than 48 hours per month was paid	Maximum overtime paid in hours in a month
Mathura	51	1243	202	136
Karnal	20	593	545	240
Loni	5	412	313	152
Jaipur	8	351	122	122

The Management stated (November 2008) that some of the bottling plants were yet to achieve rostering of manpower in line with the benchmarks. Continuous efforts were made to reduce the deployment levels closer to benchmark norms for reducing the overtime as well as cost at the bottling plants.

Thus, the fact remained that the Company was paying overtime despite overstaffing and also in violation of the statutory provisions.

Recommendation No. 5.5

Efforts need to be made to rationalise overtime payment through deployment of manpower within benchmark. Overtime should be paid in line with statutory provisions.

5.8.3.3 Loss due to increase in cost of repair and maintenance

The Company had fixed a norm for consumption of valves at 1.6 *per cent* of the cylinders filled. Actual average consumption of valves during 2007-08 in the Company was 0.875 *per cent* of cylinders filled and was well within the norms. However, in three units, *viz.*, Gurgaon, Refinery co-ordinator office-Chennai Petroleum Corporation Limited and Lakhimpur Kheri bottling plants, the valve consumption was significantly higher than the norms and ranged from 2.085 *per cent* to 3.157 *per cent*.

The Management stated in November 2008 that the target of 1.6 *per cent* for valve consumption was fixed to ensure that no leaky cylinders were dispatched to the customers. However, valve consumption at the specified plants increased as more leaky cylinders were detected and replaced with new valves to avoid supply of leaky cylinders to the customers.

The reply was not convincing as reasons for leaky cylinders in excess of norms by three to four times were not analysed and indicated by the Company.

Recommendation No. 5.6

The Company needs to identify the reasons for abnormal increase in consumption of valves and take remedial measures for non-achievement of the prescribed limit.

5.8.4 Deviations from Industry Logistics Plan

5.8.4.1 Loss in transportation cost due to un-economic linkages.

The Company prepared monthly Industry Logistic Plan (ILP) for optimal routing of bulk LPG from various sources to bottling plants and packed LPG from bottling plants to market/distributors at minimum cost by using a specialised software *viz.*, SAND⁸ module considering various input parameters like availability of LPG at different sources, bottling capacity of plants, market demand, transportation cost and operating cost of the plants, *etc.*

In order to reap full benefits of the system it is necessary that the input parameters should be updated on real time basis. Audit observed that the SAND module was run by the Company on monthly basis and the input parameters were not updated on real time basis resulting in deviations from the projected logistics plan and consequent losses or gains during 2007-08 as indicated below:

- In Northern region, there was a saving of Rs.138.99 crore in seven months and a loss of Rs.87.91 crore in five months with a resultant net gain of Rs.51.08 crore;
- In Western region, there was a savings of Rs.212.79 crore in ten months and a loss of Rs.1.47 crore in two months with a resultant net gain of Rs.211.32 crore;

⁸ Supply and Distribution

- In Southern region, there was a saving of Rs.135.09 crore in seven months and a loss of Rs.75.93 crore in five months with a resultant net gain of Rs.59.16 crore, and
- In Eastern region, there was a saving of Rs.158.98 crore in nine months and a loss of Rs.65.42 crore in three months with a resultant net gain of Rs.93.56 crore.

Audit also observed that the bottling plants were attached with limited number of LPG sources instead of all available sources. This limitation restricted the system to optimise the linkage within the limited number of LPG sources attached to the bottling plants and not with respect to all available sources.

The Management stated (November 2008) that bottling plants were attached with all realistic probable and feasible sources with minimum three sources attached with each bottling plant. Non-feasible and unrealistic linkages had not been taken into consideration. ILP linkages were finalised based on the projected demand and other inputs. Actual movements varied depending on various factors including unforeseen circumstances.

The reply was not tenable because Udaipur, Loni, Ajmer, Jhunjunu, Bikaner and Sawaimadhopur bottling plants were not attached to even three minimum sources during April 2007. It is possible to get better optimisation by attaching bottling plants to all sources instead of attaching them to a limited number of sources. Overall savings achieved in all the regions due to deviations from the ILP indicated deficiencies in updating the actual inputs and results of ILP. Though manual modifications from the ILP suggested linkages resulted in gain at regional level, no exercise was done by the Company to study the holistic impact at the company level.

5.8.4.2 Loss in transportation of packed LPG

The Company is paying freight on round trip basis (RTD) for transportation of packed cylinders from plant to distributors and to bring empty cylinders from distributors as per the transportation agreements that provided for payment of transportation charges per cylinder per kilometre (km).

Audit observed that in Loni bottling plant, the transportation contract for packed LPG cylinders was renewed in November 2007 with two rate slabs for transportation charges within the State viz., (i) RTD upto 50 km and (ii) RTD above 50 km. As a result of introduction of two slabs instead of per km rate the Company saved Rs.34.16 lakh *per annum*.

Similarly actual savings in Bihar State office during July 2006 to March 2008 towards transportation cost due to implementation of new slabs, *i.e.*, upto RTD of 50 km and beyond 50 km on packed LPG transportation cost was Rs.1.30 crore.

The Management while agreeing with Audit (November 2008) on savings in case of Loni bottling plant apprehended that in slab rate system transporters may work out rates based on highest km slab and might result in higher financial outgo.

The apprehension of the Management is not tenable in light of proven savings achieved due to introduction of a new slabs in the above two instances.

Recommendation No. 5.7

The Company should ensure minimum transportation charges by reviewing the slab system in other State Offices in line with Bihar State Office.

5.8.4.3 Short receipt of bulk LPG through transportation

The bulk LPG transferred from refineries/dockyards to LPG bottling plants is shared by road (63 per cent), pipeline (25 per cent) and rail (12 per cent). Weighing of LPG is done through weighbridges in case of road and rail transfers and through mass flow meters in case of pipeline transfers.

During audit, the following instances were noticed

- a. The Tikrikalan LPG bottling plant was not having a wagon weighbridge and receipt of the LPG by railway wagons was accepted on 'said to contain basis'. Due to non-availability of weighing scale in the plant, the Company could not safeguard its interest against short receipt of LPG in transit nor claim the same from Railways and consequently suffered loss of Rs.8.63 crore during the period 2005-06 to 2007-08.
- b. Kanpur LPG bottling plant was receiving bulk LPG from different dispatch locations through rail since 2005-06. The quantities of bulk LPG received through rail were also accounted for on "said to contain basis". During the year 2006-07 and 2007-08; the short receipt was 1.76 TMT LPG valuing Rs.3.14 crore for which no claims were lodged on Railways.
- c. Devanagonthi (Karnataka) LPG bottling plant received short supply of 2.44 TMT of bulk LPG transported in tank wagons from Mangalore LPG Import Facility during the period 2001-2002 to 2005-06 due to non-operation of weighbridge resulting in loss of Rs.3.52 crore to the Company. The Company preferred a claim for compensation for the stock loss on HPCL (the supplier) which was not accepted by them.

The Management stated (November 2008) that major input of bulk LPG through rail at Tikrikalan and Kanpur bottling plants was from Reliance Industries Limited (RIL) Jamnagar. After consistent pursuance with RIL on Industry basis, it has since been decided to appoint a surveyor to witness the loading operation at RIL Jamnagar on behalf of Industry. Regarding loss at Devanagonthi bottling plant, the Management stated that despite pursuance for compensation with HPCL, the same was not accepted by the latter.

Thus, due to inadequate weighing infrastructure and delayed action to safeguard its interest, the Company suffered a loss of Rs.15.29 crore.

Recommendation No. 5.8

Adequate infrastructure should be installed at the source and destination to avoid losses and pilferages.

5.8.4.4 Unrealistic transit loss norms

As per the vendors' specifications, the weighbridge accuracy tolerance was +/-10 kg for non-self indicating weighbridge upto 50 MT capacity. For such weighbridges International Organization of Legal Metrology (IOLM) prescribed a permissible error limit of +/-20 kg. However, the Company, in its transportation contracts with transporters for movement of bulk LPG by road, agreed to ignore any shortages upto a maximum of

100 kg per trip between the loading point and unloading point, irrespective of tank truck (TT) capacity.

Considering IOLM standards, weighing error limit of each consignment worked out to 40 kg per TT per trip (20 kg each at the loading and unloading locations) as against 100 kg adopted by the Company. Review of bulk LPG movement in 21 bottling plants of Northern Region for the period 2005-06 to 2007-08, revealed transit loss of 2.07 TMT amounting to Rs.8.86 crore being the difference between the reasonable loss of 40 kgs per tank truck as against the actual loss upto 100 kgs allowed by the Company.

It was noticed that the District administration had caught red-handed seven bulk TTs of OMCs in Loni during 2008 filling cylinders *en route* to the plants. The raid established that transporters were misutilising the excess leverage so allowed to them.

The Management stated (November 2008) that bulk TTs was subject to weighing four times and due to variation in calibration of the weighbridge at the loading/unloading location, weighing differences were noticed. Moreover, there were limitations for the decantation of the product and entire product could not be unloaded from a particular truck leading to gain at one location and loss at another. Weight variation to the tune of 80-90 kg was observed between the loading location and the unloading location even under escorted condition. To ignore any shortage upto a maximum of 100 kg per trip was an Industry norm.

The reply of the Management was not acceptable as industry norms of weight loss above 100 kg were not in conformity with the recognised standards or manufacturer's specifications of the weighing scales. A test check of five locations involving 20,801 trips during 2007-08 indicated that there was zero loss in 6838 trips (33 *per cent*), loss of less than 40 kg in 7,683 trips (37 *per cent*). Thus, transit loss in 70 *per cent* cases was upto 40 kg indicating that the norm for 100 kg transit loss was not realistic.

Recommendation No. 5.9

The Company should revisit the existing transportation agreement provisions relating to weight loss norms and should rationalise the same with available standards.

5.8.5 Inventory management

5.8.5.1 Storage of filled cylinders beyond licensed capacity

As per provisions of LPG Operation Manual, the stock of filled cylinders should be within the licensed capacity to avoid any hazardous incident.

As per the license issued by the Chief Controller of Explosives (CCOE), the licensed storage capacities of bottled LPG at Chakan and Manmad bottling plants were 11,928 kg and 70,000 kg per day respectively. It was noticed that stock of packed cylinders was in excess of the licensed storage capacity during 16 out of 25 working days in January 2008 at Chakan bottling plant and 37 days between July 2007 and July 2008 at Manmad bottling plant.

The Management stated (November 2008) that excess stock was loaded in trucks which could not be dispatched for want of indents or any other reason (invoice not getting generated due to loss of connectivity to server) and stock on wheels (in trucks) did not require explosive license.

The reply of the Management was not tenable as the filled cylinders in trucks remained within the plant premises and therefore, required to be within the licensed limit for storage of packed LPG cylinders to avoid risk.

Recommendation No. 5.10

Bulk and packed LPG stock levels should be maintained within the permissible limits prescribed by the CCOE to ensure safety of the plant, staff and surrounding property/population.

5.8.5.2 Delay in disposal of scrap/non-moving items

A test check of inventory records as on March 2008 revealed the following cases of blockade of funds due to non-disposal of scrap/non-moving items:

- De-shaped valves, pressure regulators and rejected cylinders valuing Rs.5.04 crore were lying undisposed at 13 bottling plants ranging from two to three years.
- The use of aluminium safety caps was replaced with plastic safety caps. The unused stock of aluminium caps across the Company was neither used nor disposed off resulting in blocking a sum of Rs.28 lakh.

The Management stated (November 2008) that the disposal activities suffered due to minimum lot size not being available or the reserve price not getting realised during disposal attempts.

The reply of the Management was not tenable as some of the scrap was lying for a period more than two to three years and unnecessary accumulation of scrap results in blockage of fund and inventory carrying cost.

Recommendation No. 5.11

The Company should evolve an effective system for timely disposal of scrap/idle inventory, to avoid blockade of funds.

5.8.5.3 Blockade of funds in non-moving stock of empty cylinders of other OMCs

It was noticed that 32,757 cylinders (14.2 kg) and 19,574 cylinders (19 kg) of other OMCs (HPCL and BPCL) valuing Rs.5.44 crore were lying with the Company. However, the Company did not have knowledge of the number of its empty cylinders lying with other OMCs. Non-exchange of empty cylinders with OMCs resulted in blocking of working capital in non-moving inventory, avoidable inventory carrying cost and additional procurement thereagainst to meet the market requirements.

The Management accepted (November 2008) that over a period of time, at some of the bottling plants, higher inventories of OMCs' cylinders have accumulated. It was informed that policy guidelines had been evolved at industry level for transfer of OMCs' cylinders to these plants and the same were expected to be circulated and made operational shortly.

However, the fact remains that due to absence of effective system for exchange and reconciliation with other OMCs at industry level, there was blockade of working capital.

Recommendation No. 5.12

The Company may evolve an effective control system of exchange and reconciliation of cylinders with other OMCs at regular intervals.

5.8.6 Distribution and diversion

Review of release of LPG connections, refill audit of distributors and monitoring of diversion of domestic LPG for unauthorised usage revealed the following shortcomings:

5.8.6.1 Multiple LPG connections

The Government of India reimbursed subsidy of Rs.22.58 per domestic cylinder and an equal amount was shared by Oil and Natural Gas Corporation Limited, GAIL (India) Limited and Oil India Limited. Total domestic subsidy bill of the Government of India during 2006-07 was Rs.1,572 crore. Considering the magnitude of the expenditure incurred by the GOI on subsidy it is imperative that steps may be taken to control the misuse of domestic LPG.

In this regard LPG order, 2000 stipulates that a person shall not possess more than one LPG connection under Public Distribution System. The Company is taking a declaration to that effect from the customers applying for new LPG connections. However, the Company or its distributors were not maintaining a comprehensive inter-company customer database to check existing connection of any OMC in the name of applicant while releasing a new connection.

The Management expressed (November 2008) its inability to maintain central data bank of its five crore customers handled by 4,996 distributors due to non-connectivity of remote places.

The fact remained that due to inadequate measures and lack of co-ordination on the part of the Company with its distributors and other OMCs, release of multiple connections could not be checked. Audit observed that in an inter-company exercise conducted by the OMCs (July 2008) multiple connections as detailed below were identified.

Table 5.5

Name of the OMC	Multiple connections identified	Same name same address	Different name same address	Connections terminated/blocked	<i>(figures in lakhs)</i>
					Balance
IOCL	43.39	3.97	39.42	8.39	35.00
BPCL	3.90	NA*	NA*	3.62	0.28
HPCL	60.45	4.12	56.33	5.19	55.26
Total	107.74	8.09	95.75	17.20	90.54

**NA represents information not made available to audit.*

As against the total of 107.74 lakh multiple connections identified by OMCs only 17.20 lakh connections could be terminated/blocked. The action in respect of remaining connections was yet to be taken. Thus, due to absence of comprehensive data bank OMCs could not exercise effective control to prevent multiple connections.

Audit is of the opinion that consumers should be allotted consumer numbers centrally at industry level all over India instead of at Company/distributor level to avoid release of multiple connections. In addition, the OMCs should devise a uniform declaration form to be obtained at the time of release of connections that should include surname, name, date

of birth, yearly income, ownership of house/land/vehicles and should be supplemented with PAN/passport/birth certificate in addition to voter ID card number.

The Management stated (November 2008) that the recommendation of the Audit was already under implementation in the Company. In May 2007 industry as a whole had recommended to the GOI to modify the LPG order to the effect that instead of a person, a household shall have only one connection. Further action could not be taken as the revision in the LPG control order had not been approved.

Recommendation No. 5.13

(i) The Company should evolve comprehensive customer master data and take necessary steps to identify and capture details of LPG consumers like size of the family and consumption pattern necessary for prevention of unauthorised use of domestic LPG and multiple connections.

(ii) The Company should share customer database with other OMCs to avoid release of multiple connection.

5.8.6.2 Delay in identifying the customers having PNG connections

The Oil PSUs through joint ventures are supplying PNG to domestic, commercial and industrial consumers and have released over 4.40 lakh domestic PNG connections upto 2007-08 in Mumbai and Delhi alone.

A test check of records revealed that as of July 2008 out of 64,214 PNG customers in Delhi, 26,811 customers (41.75 per cent of the total customers) were possessing LPG connection issued by the Company. The LPG Order, 2000 did not prohibit the PNG customer to retain domestic LPG connection.

The Management agreed (November 2008) that LPG Order, 2000 did not make PNG customer ineligible to possess a domestic LPG connection or *vice versa*. OMCs had written to the GOI in February 2007 and September 2008 to incorporate modifications in LPG Control Order so that both PNG and LPG connections could not be held simultaneously by the customers.

Thus, there was no effective system to enforce surrender/termination of existing LPG connections of PNG customers which resulted in non-utilisation of cylinders for the new customers and possibility of diversion of cylinders for unauthorised usage.

Recommendation No. 5.14

LPG order 2000 needs to be revised and effective system may be put in place to take back LPG connections from PNG consumers to ensure that a customer is allowed to hold only one connection either PNG or LPG at a point of time.

5.8.6.3 Frequent refills of domestic LPG cylinders – possibility of diversion

It was noticed that while releasing a commercial connection, the Company enquired about the consumers' yearly consumption but the same was not being followed in respect of domestic consumers. In case of domestic LPG connection, details as to family size and consumption pattern of the domestic users was also not collected by the Company. In the absence of the required detailed information about the family size and the consumption pattern, average per capita consumption during 2007-08 ranged from 2.56 kg per month (Uttarakhand) to 16.28 kg per month (Uttar Pradesh). A distributor under Karnal Area

office of the Company was found issuing three refills at a time to a domestic DBC⁹ consumer due to no input control in the software used for capturing and monitoring refills to the consumers.

The Company was fixing month-wise SPD (Supply Plan for Distribution) for each distributor; considering the average sale of the same month of the two immediately preceding years. Existing mechanism of fixation of SPD without considering the LPG consumption pattern based on family size of the consumers could result in diversion of domestic cylinders for commercial use.

The Management stated (November 2008) that in order to calculate the demand figures of various distributorships for planning, based on historical data; the SPD has been found to be an effective tool. SPD could not be construed as an agent for diversion or backlog.

The reply was not tenable because existing system of SPD for determining the refills to be allocated to the distributors might lead to diversion of domestic LPG cylinders for commercial purposes in case SPD exceeded the actual demand.

Recommendation No. 5.15

The Company should review the system of fixing SPD to rationalise it in line with actual consumption pattern based on family size. The Company should also maintain cylinders masters with distinctive numbers allocated to each cylinder to control diversion of domestic LPG for commercial use.

5.8.6.4 Refill audit

The Company periodically carried out refill audit of distributors to check the genuineness of LPG connections, inventories of cylinders and accessories and to examine the complaints of the customers.

Audit analysis revealed that irregularities noticed by the Company during refill audits increased from 546 in 2005-06 to 905 in 2007-08. Similarly cylinders found under diversion for commercial use increased from 38,330 during 2005-06 to 50,640 during 2007-08. The Company had imposed major or minor penalties in all the cases. However, increasing number of irregularities is indicative of inadequacy of the penal provisions of the guidelines to deter the distributors from committing such irregularities. In addition, district authorities along with the Company conducted 6,067 raids during last four years ended March 2008 and seized 46,590 numbers of cylinders in addition to 2,201 motorists found using domestic cylinders as fuel.

The Management stated (November 2008) that audit recommendations to curb diversions of domestic LPG for unauthorised use and for multiple and fake LPG connections was under implementation.

Recommendation No. 5.16

The Company should revisit its existing Marketing discipline guidelines and make penal provisions more stringent.

5.8.6.5 Tampered tare weight of cylinders

⁹ Double bottle connection

As per the LPG Marketing Discipline Guidelines, 2001, supply of partially used cylinders/pilfering product from cylinders is an act attracting invocation of major penalty.

In Mathura bottling plant the distributors/transporters changed the tare weight printed on 42,493 cylinders during January 2007 to October 2008 to conceal the theft of gas from LPG cylinders. Against such tampered cylinders, the plant was recovering Rs.16 per cylinder from distributors/transporters instead of applying the provisions of the guidelines.

The Management stated (November 2008) that tampering of tare weight is a phenomena reported at very few locations on All India basis. Guidelines have also been issued on All India basis for recovering a uniform penal rate of Rs.200/- per cylinder.

The reply was not tenable because action in such cases should be taken as per the provisions of the approved guidelines.

Recommendation No. 5.17

The Company needs to strictly deal with this issue to discourage such malpractices so as to ensure supply of proper weight of LPG to the customers.

5.8.6.6 Non-compliance of Marketing Discipline Guidelines

LPG Marketing Discipline Guidelines (MDG), 2001 of the Company provide for imposition of major or minor penalty on commitment of specified type of irregularity¹⁰ by the distributor. The penalty increases progressively for second and third irregularity detected and in case of 3rd major irregularity or 4th minor irregularity the distributorship is terminated.

Inspection of 36 distributors in Agra Area office carried out by the Company during February 2007 to October 2007 revealed 59 irregularities against 17 distributors. However, the Company treated more than one irregularity detected in case of each distributor as first irregularity instead of treating them as second and subsequent irregularities. Had the Company correctly enumerated successive irregularities, six distributors would have got termination.

The Management stated (November 2008) that as per practice, when more than three irregularities are detected on the same day, it is considered as first instance only and penalties are imposed as per the nature of irregularity as stipulated in MDG. However, OMCs have recommended revision of MDG with more stringent provisions to the GOI.

The reply was not tenable as the main objective of defining penalty by the Company was to regulate fair distribution. Liberal implementation of MDG due to incorrect enumeration of irregularities had led to increasing irregularities in distribution.

Recommendation No. 5.18

The MDG guidelines should be strictly followed in letter and spirit for an effective control and monitoring system of the distributors.

5.8.7 Other points of interest

5.8.7.1 Decline in sale of five kg LPG cylinders

¹⁰ like forced sale of stoves/hot plates, recovery of unauthorised charges, supply of partially used cylinders/pilfering products from cylinders, diversion of domestic cylinders to non-domestic use, etc.

The Company introduced five kg LPG cylinders for domestic use for hilly areas where it is unaffordable and physically difficult to access 14.2 kg cylinders. However, the customers in this size reduced by 4.1 *per cent* in 2007-08 as compared to 2006-07 whereas there was a growth of 7.9 *per cent* in the customers of 14.2 kg domestic cylinders over the same period. The Company has not considered permitting the use of five kg LPG cylinders for commercial purposes.

The Management stated (November 2008) that the LPG Order 2000 stipulated use of five kg cylinders only for domestic purposes and had not permitted their use for non-domestic purpose.

The Company may either explore the possibility of suggesting modification in the LPG order for use of five kg cylinder for commercial use or revisit the continuance of this segment after evaluation of economics.

5.8.7.2 Abandonment of LPG bottling plant at Vasai

The Company decided (September 2000) to set up a bottling plant with 10 TMTPA capacity at Vasai, Mumbai at an estimated cost of Rs.8.20 crore. The Company had incurred Rs.5.90 crore for land acquisition and construction related work but the project could not progress due to opposition from the local villagers. Due to revision in the project cost to Rs.11 crore the Company decided (November 2006) to abandon the construction of the plant.

Review of records revealed that justification for taking up the project was not adequate as sufficient bottling capacity was available in Chakan and Manmad plants of the Company to meet the demand of Mumbai and Thane region.

Thus, decision to set up the plant at Vasai resulted in avoidable loss of Rs.2.60 crore on account of expenditure incurred on building at site.

The Management stated in November 2008 that bottling plant at Vasai was approved at the cost of Rs.8.20 crore during September, 2000, based on the financial viability, future demand prospects and other strategic considerations. However, the project activities could not be undertaken on sustained basis due to continuous resistance from locals. The project was re-evaluated during 2006, and a conscious decision was taken to abandon the construction activities so as to save the balance capital expenditure as well as to save future recurring costs.

The reply of the Management was not tenable as the available capacity of the existing plants should have been assessed *vis-à-vis* demand while deciding to set up the plant. Further the disputes with local residents/authorities are a normal problem in any land acquisition case and should have been ascertained and settled well in advance prior to starting construction work and placing other work orders.

5.8.7.3 Inadequate security cover for transported LPG cylinders

For transportation of packed LPG the Company enters into transportation contracts and takes security of Rs. three lakh for each contract irrespective of the number of trucks deployed for packed LPG transportation from plant to distributor and Rs. two lakh wherever the transporter is a distributor.

It was noticed that the security deposit of Rs two or three lakh as the case may be was inadequate to cover even one LPG consignment consisting of 306 number of packed LPG cylinders of 14.2 kg worth over Rs.five lakh.

The Management while accepting the audit view apprehended increase in transportation rates on loading all the risk factors in the contract and added that there are very few cases where theft of the cargo had taken place in the past.

The reply of the Management was not tenable because in anticipation of increase in transport rates; the Company should not keep its LPG packed consignment under-secured and the contention that few cases of theft had taken in the past did not guarantee that there may not be any major loss in future.

Recommendation No. 5.19

The Company should amend existing provisions of security deposit in the contracts so as to secure comprehensive coverage of LPG consignments.

5.9 Conclusion

The Company was mixing butane and propane to form LPG in different proportions other than the one considered for subsidy claims resulting in loss of Rs.40.97 crore during five years ended March 2008 and supply of LPG with higher butane. Actual operating cost in more than 50 *per cent* bottling plants was less than the cost ceiling fixed in the subsidy scheme which indicated a need to revise the cost ceiling under the subsidy scheme based on the standard and normative conditions. The Company not only had excess deployment of manpower *vis-à-vis* benchmarks but was also paying overtime entailing financial bearing in terms of higher operating cost of the bottling plants.

Despite adoption of ILP system for distribution of LPG to meet the market demand, the Company failed to use the suggested ILP linkages, leading to frequent deviations/manual interventions that remained unevaluated through ILP. Due to wide gap between the prices of subsidised LPG and commercial LPG an effective system to curb diversion of domestic LPG for commercial usage was required. The Company failed to exercise effective control in the absence of adequate customer master database integrated with other OMCs which led to issuance of multiple and possible fake connections.

The Company adopted a lenient approach in following the marketing discipline guidelines for penalising dealerships which led to increasing indiscipline in the distribution channel. Similarly the cases of tampering of tare weight of cylinders were not dealt with as per the guidelines.

The matter was reported to the Ministry in January 2009; reply was awaited.